We Claim:

1. A micro-electromechanical fluid ejection device that comprises

a substrate that defines a fluid inlet channel and incorporates a wafer and CMOS layers positioned on the wafer;

a wall that extends from the substrate and bounds the fluid inlet channel;

an elongate actuator that is connected at one end to the CMOS layers, an opposite end of the actuator being displaceable towards and away from the substrate on receipt of an electrical signal from the CMOS layers; and

a nozzle that is connected to said opposite end of the actuator, the nozzle having a crown portion and a skirt portion that depends from the crown portion, the crown portion defining a fluid ejection port and the skirt portion being positioned so that the nozzle and the wall define a chamber in fluid communication with the fluid inlet channel and a volume of the fluid chamber is reduced and subsequently enlarged as the nozzle is driven towards and away from the nozzle chamber by the actuator to eject fluid from the fluid ejection port.

2. A micro-electromechanical fluid ejection device as claimed in claim 1, in which an edge of the skirt portion is positioned adjacent an edge of the wall such that, when the chamber is filled with liquid, a meniscus is pinned by the edges of the skirt portion and the wall to define a fluidic seal that inhibits the egress of liquid from between the wall and the skirt as liquid is ejected from the fluid ejection port.

3. A micro-electromechanical fluid ejection device as claimed in claim 1, in which the crown portion includes a rim that defines the fluid ejection port, the rim providing an anchor point for a meniscus that is formed in the fluid ejection port when the chamber is filled with liquid.

4. A micro-electromechanical fluid ejection device as claimed in claim 1, in which an arm interconnects said opposite end of the actuator and the nozzle.

5. A micro-electromechanical fluid ejection device as claimed in claim 4, in which the actuator includes a pair of active beams that are anchored and electrically connected to the

CMOS layers and a flexible passive structure that is anchored to and electrically insulated from the CMOS layers, both the active beams and the passive structure being connected to the arm, the active beams defining a heating circuit and being of a thermally expandable material and the passive structure being interposed between the active beams and the substrate such that, when the active beams are heated by an electrical current, which is subsequently cut off, the active beams expand and contract, causing said opposite end of the actuator and thus the arm and the nozzle to be driven towards and away from the substrate.

6. A micro-electromechanical fluid ejection device as claimed in claim 5, in which the passive structure is in the form of a pair of passive beams of the same material as the active beams, the active beams being spaced from the passive beams so that spacing between the active beams and the passive beams is greater than one percent of a length of the actuator and less than twenty percent of the length of the actuator.

7. A micro-electromechanical fluid ejection device which comprises

a substrate that defines a plurality of fluid inlet channels and incorporates a wafer and CMOS layers positioned on the wafer;

walls that extend from the substrate to bound respective fluid inlet channels;

elongate actuators that are connected at one end to the CMOS layers, an opposite end of each actuator being displaceable towards and away from the substrate on receipt of an electrical signal from the CMOS layers; and

nozzles that are connected to respective said opposite end of the actuators, each nozzle having a crown portion and a skirt portion that depends from the crown portion, the crown portion defining a fluid ejection port and the skirt portion being positioned so that the nozzle and a respective wall define a chamber in fluid communication with the fluid inlet channel and a volume of the fluid chamber is reduced and subsequently enlarged as the nozzle is driven towards and away from the nozzle chamber by the actuator to eject fluid from the fluid ejection port.